



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/640,674	08/18/2000	Frank Hundscheidt	012050-066	6777
27045	7590	06/14/2006	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			FERRIS, DERRICK W	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/640,674

Applicant(s)

HUNDSCHIEDT ET AL.

Examiner

Derrick W. Ferris

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33 and 34 is/are allowed.
- 6) ☒ Claim(s) 30 and 35-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/21/2006 has been entered.

Response to Amendment

2. This Office action is in response to applicant's amendment filed 4/21/2006. All claim objections are withdrawn. Please note that claims 33 and 34 are considered allowable. However, also note the other independent claims were not allowed. In particular, the prior indication of the allowability of canceled claim 32 was made in error by the examiner. Specifically, the further limitation "or bearer capability information" is taught by the cited prior art reference given a reasonable but broad interpretation in view of applicant's specification in view e.g., rejected canceled claim 31. *Ericsson* teaches bearer capability information as bearer information, see e.g., page 27, lines 51-21. *Boakye* also teaches bearer capability information as bearer capability, see e.g., column 4, lines 25-63. Hence the above rejection(s) are maintained. However, the examiner will withdraw the rejections below should applicant remove the above claim recitation at issue.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2616

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. **Claims 37, 41 and 43** is rejected under 35 U.S.C. 102(a) as being anticipated by WO 99/16266 A to *Ericsson*.

As to **claim 37**, see e.g., figure 9 of *Ericsson* where an interworking node is taught as GGSN 116. In particular, for the purpose of the rejection, note that the mapper 128 is taught for the GGSN 116 and not the mobile station 102. As such, with respect to receiving at the interworking node, packet-switched service parameters from the packet-switched network, wherein the packet-switched service parameters define a level of precedence assigned to the data stream within the packet-switched network, wherein packets in a data stream with a higher level of precedence may be protected from being dropped when there is congestion in a packet switched network, see e.g., IP QoS parameters taught on page 24. In particular, a “service class” sets a level of precedence for avoiding network congestion. With respect to mapping the packet-switched

parameters into corresponding circuit-switched service parameters, wherein the circuit-switched service parameters define level of precedence assigned to the data stream in the packet-switched network, wherein a call with a higher level or precedence may preempt a call with a lower level or precedence where there are insufficient network resources in the circuit-switched network for both calls, see e.g., CS QoS parameters taught on page 24. In addition, see e.g., top of packet 32 with respect to dynamically selecting particular QoS parameters. In particular, “bearer services” sets a level of service for avoiding congestion. With respect to forwarding payload data across a network boundary between the packet-switched network and the circuit switched network using the mapping result wherein the payload data is transported in the circuit-switched with a precedence level corresponding to the mapped precedence level of the packet-switched network, the packets are forwarded over the circuit-switched bearers (see figure 9).

As to **claim 43**, see similar rejection to claim 37.

As to **claim 41**, see similar rejection to claim 37. In addition, RSVP is further taught at e.g., bottom of page 18 of *Ericsson*.

5. **Claim 30, 37, 42, and 43** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,175,576 b1 to *Boakye et al.* (“*Boakye*”).

As to **claim 30**, see e.g., figures 1 and 2 of *Boakye* where an interworking node is taught as ESP 22 shown in greater detail in figure 2 where a circuit-switched network is PSTN 44 and a packet-switched network is IP 46. As such, with respect to receiving at the interworking node, circuit-switched service parameters from the circuit-switched network, wherein the circuit-switched service parameters define a level of precedence of

an assigned call in the circuit-switched network, wherein a call with a level of higher precedence may preempt a call with lower precedence when there is insufficient network resources in the circuit-switched network for both calls, see e.g., step 50 in figure 3a with respect to a call setup message. In particular, a call is received by the ESP 22 which describes the communication capability of the channel being used to call the ESP 22 (i.e., the bearer capability), see e.g., column 4, lines 25-62. Specifically, note that the bearer capability includes a set of services to pertain the specific parameters needed to perform an application at the highest quality. Thus included in the bearer capability is a level of precedence assigned to the call. Further examples of precedence are taught e.g., as maximum bandwidth and application capability, see e.g., column 4, lines 16-25. Hence the bearer capabilities are further used for call pre-emption since the set of services is used to maintain the connection. In addition, see e.g., column 2, lines 35-42 with respect to disconnecting a call that does not further meet service requirements. With respect to mapping the circuit-switched service parameters into corresponding packet-switched service parameters, wherein the packet-switched service parameters define a level of precedence utilized for a data stream within the packet-switched network corresponding to the level of precedence assigned to the call in the circuit-switched network, wherein packets in a data stream with a higher level of precedence may be protected from being dropped when there is congestion in the packet-switched network, see e.g., column 5. In particular, the ESP 22 takes the bearer capabilities from the calling device and then tests to see whether the called device supports these capabilities (or uses defaults stored in table 36), see e.g., column 5, lines 1-5. If the called device does not support these

capabilities then the connection is dropped. With respect to forwarding payload data across a network boundary between the circuit-switched network and the packet-switched network using a mapping result wherein the payload data is transported in the packet-switched with a precedence level corresponding to the mapped precedence level of the packet-switched network with a precedence level corresponding to the mapped precedence level from the circuit-switched network, the message is forwarded over the broadband network, see e.g., column 5, lines 47-51 which teaches that if a match is made then the ESP 22 establishes the bearer at the closest rate, step 84 in figure 3b (i.e., a connection is established such that the closest bearer capabilities are matched or mapped).

As to **claim 37**, see similar rejection to claim 30 where either the PSTN 44 or IP 46 networks may be used, see e.g., column 3, lines 60-64.

As to **claim 42**, see the rejection for claim 30 where at least bearer capability is taught by the reference.

As to **claim 43**, see similar rejection to claim 37.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2616

7. **Claims 35 and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,175,576 b1 to *Boakye et al.* ("*Boakye*") in view of "An Architecture for Differentiated Services" to *Blake et al.* ("*Blake*").

As such to **claims 35 and 36**, *Boakye* discloses using TCP/IP but may be silent or deficient to further using a service differentiation field DS of either an IPv4 or an Ipv6 packet..

Boakye is silent or deficient to the further limitation using the packet-oriented protocol bit settings in a service differentiated field (DS) of the packet.

Blake teaches the further recited limitation above at e.g., page 3 first full paragraph in view of page 5 in reference to a "DS field".

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Boakye* by clarifying that DiffServ uses the DS field as is well known in the art such that the bit settings in the service differentiated field are used.

As such, the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the further limitation said differentiation field (DS) is a Traffic Class Octet according to IPv6 or a Type of service field according to IPv4. In particular, the motivation for modifying the reference or to combine the reference teachings would be to clarify how DiffServ works as is well known in the art. In particular, *Blake* cures the above-cited deficiency by providing a motivation found at e.g., page 1 since *Blake* discloses the architecture for DiffServ. Second, there would be a reasonable expectation of success since *Blake* discloses the architecture for DiffServ.

Art Unit: 2616

8. **Claim 39** is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/16266 to *Ericsson* in view of U.S. Patent No. 6,587,457 B1 to *Mikkonen*.

As such to **claim 39**, see similar reasoning for claim 37.

Ericsson is silent or deficient to the further limitation protocol label switching (e.g., MPLS). However, *Ericsson* does disclose layer 2 tunneling to the ISP and also teaches that the IP tunnel could be ATM or FR, see e.g., page 28, lines 9-15.

Mikkonen teaches the further recited limitation above at e.g., figure 6.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Ericsson* by showing that MPLS can be used as an IP tag for either an IP tunnel or for ATM.

As such, the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the further limitation protocol label switching (e.g., MPLS). In particular, the motivation for modifying the reference or to combine the reference teachings would be to reduce the need for performing time consuming routing on the basis of the address data of the network layer. In particular, *Mikkonen* cures the above-cited deficiency by providing a motivation found at e.g., column 3, line 1-20.

Second, there would be a reasonable expectation of success since *Mikkonen* shows that MPLS is implemented in a wireless network and at a mobile IP router in particular.

9. **Claims 38 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,175,576 b1 to *Boakye et al.* ("*Boakye*") in view of U.S. Patent No. 6,587,457 B1 to *Mikkonen*.

As such to **claim 38**, see similar reasoning for claim 30.

Art Unit: 2616

Boakye is silent or deficient to the further limitation protocol label switching (e.g., MPLS).

Mikkonen teaches the further recited limitation above at e.g., figure 6.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Boakye* by showing that MPLS can be used as an IP tag for either an IP tunnel or for ATM.

As such, the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the further limitation protocol label switching (e.g., MPLS). In particular, the motivation for modifying the reference or to combine the reference teachings would be to reduce the need for performing time consuming routing on the basis of the address data of the network layer. In particular, *Mikkonen* cures the above-cited deficiency by providing a motivation found at e.g., column 3, line 1-20. Second, there would be a reasonable expectation of success since *Mikkonen* shows that MPLS is implemented in a wireless network and at a mobile IP router in particular.

As to **claim 39**, see similar rejection to claims 37 and 38.

10. **Claims 40 and 41** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,175,576 b1 to *Boakye et al.* ("*Boakye*") in view of "RFC 2005: Resource ReSerVation Protocol (RSVP)" to *Braden et al.* ("*Braden*").

As such to **claim 40**, see similar reasoning for claim 30.

Boakye is silent or deficient to the further limitation of using RVSP.

Braden teaches the further recited limitation above at e.g., page 1 with respect to an IP network.

Art Unit: 2616

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Boakye* by showing that RSVP can be run over an IP network.

As such, the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above further limitation to reserve bandwidth for a high priority connection. In particular, the motivation for modifying the reference or to combine the reference teachings would be to provide QoS for a flow along a data path. In particular, *Braden* cures the above-cited deficiency by providing a motivation found at e.g., page 1.

As to **claim 41**, see similar rejection to claims 37 and 40.

Allowable Subject Matter

11. **Claims 33 and 34** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DWF

Derrick W. Ferris
Examiner
Art Unit 2616

 6/4/06
DERRICK FERRIS
PATENT EXAMINER